



## New environmental policy instruments to realize forest expansion in Flanders (northern Belgium): A base for smart regulation?

Peter Van Gossum<sup>a,\*</sup>, Liselot Ledene<sup>a</sup>, Bas Arts<sup>b</sup>, Rik De Vreese<sup>c</sup>, Gudrun Van Langenhove<sup>d</sup>, Kris Verheyen<sup>a</sup>

<sup>a</sup> Laboratory of Forestry, Ghent University, Geraardsbergsesteenweg 267, B-9090 Melle, Belgium

<sup>b</sup> Forest and Nature Conservation Policy Group, Wageningen University, Wageningen, the Netherlands

<sup>c</sup> Flemish Forest Organization (VBV), Belgium

<sup>d</sup> Flemish Nature and Forest Agency (ANB), Belgium

### ARTICLE INFO

#### Article history:

Received 8 November 2007

Received in revised form

20 November 2008

Accepted 22 November 2008

#### Keywords:

Instrument choice theory

Policy transfer

Legitimacy

Carbon fund

Image building

Land purchase

Forest group

### ABSTRACT

This paper evaluates the current instrument mix, designs options for smart regulation and estimates the support base of new instruments for the forest expansion policy in Flanders (northern Belgium). The framework applied is a combination of theories on instrument choice (ICT), policy transfer and legitimacy. The ICT points out that there is a need for new environmental policy instruments (NEPI) oriented to private actors that inform them or create win–win situations for all involved parties. The need is especially high for farmers, who are key actors. The policy transfer analysis suggested instruments currently in use in the Netherlands, England and Denmark that can fulfill these needs. However, the acceptability – or legitimacy – of the suggested instruments in Flanders is only high for three of these, notably the carbon fund, flexible grant scheme and expert advice (especially by forest groups). This largely fills some smart regulation gaps, like the need for information (expert advice), the involvement of other institutional actors (certifiers, forest groups) and the higher involvement of the private sector (all). However, some gaps, such as flexible land purchase through cooperation with real estate agents or other private agents and opportunities for win–win outcomes with farmers, remain. Thus, it is not possible to fully optimize the instrument mix in accordance with the smart regulation requirements in Flanders' forest expansion policy at this moment. However, as continuity or incremental change is characteristic of most public policy, this does not mean that the suggested changes will be impossible in the near future, especially with the changing character of the rural space.

© 2008 Elsevier Ltd. All rights reserved.

### Introduction

Political and societal demand for forest conservation and afforestation are coercive, especially in densely populated and sparsely afforested regions, such as Flanders (northern Belgium), Randstad (the Netherlands), Copenhagen (Denmark) and Paris (France) (Konijnendijk, 1999). In Flanders, the forest index is only 10.8% (146,381 ha) (Waterinckx and Roelandt, 2001), and the need for forest expansion in Flanders is expressed in many policy plans

(e.g. Long-term Forestry Plan,<sup>1</sup> Spatial Structure Plan Flanders<sup>2</sup>). These plans confirm the policy goal of a 10,000-ha forest expansion between 1994 and 2007 or an increment of the forest index of 0.7%. However, at the current rate, the policy goal of a 10,000-ha net forest expansion will only be reached in 127 years (Dumortier et al., 2005)! To explain this policy failure, Van Gossum et al. (2008) emphasize the lack of sufficient support for these policies from some political parties, administrations and NGOs. Most impor-

<sup>1</sup> Regional forestry plan in Flanders. There is no national forestry plan because forest policy is a regional competence in Belgium.

<sup>2</sup> A structure plan is a policy document that specifies the framework of the desired spatial structure. It gives the long-term outlook on the spatial development of the area in question. Its aim is to give more coherence to the structure planning process (preparation, assessment, and implementation). A structure plan can be compared with a master plan for spatial planning on the level of the region of Flanders.

\* Corresponding author. Tel.: +32 9 264 90 35; fax: +32 9 264 90 92.

E-mail address: [Peter.VanGossum@UGent.be](mailto:Peter.VanGossum@UGent.be) (P. Van Gossum).

tantly, there exists very limited interest among farmers in planting forests.

This lack of implementation is in conflict with the increasing demand for forest expansion for a variety of reasons, which are also internationally confirmed. There is a positive link with quality of life and recreation near the cities (Vitse, 2004; Garrod and Willis, 1992; Tyrväinen and Miettinen, 2000; Moranco, 2003). The increasing recognition of global warming and possible effect-oriented solutions like biomass production and carbon storage (e.g. Parker et al., 2000; Sin et al., 2007) also supports the planned forest expansion. Another trigger is the positive link with human health (e.g. Ulrich, 1984; Hartig et al., 2003; Kaplan, 2001; Shin, 2007). Finally, forest expansion is important for biodiversity conservation.

The new forest expansion policy (NFEP) in Flanders should target all of these different interests so that a broad support base might be created. In developing this new approach, it is important to take into account that the traditional command-and-control approach is criticized by economists for being inefficient, unnecessarily intrusive and unduly expensive to administer. Some regulations limit innovation and discourage people from searching for new, more efficient ways to achieve the intent of the regulation. Moreover, regulatory instruments may be inequitable and are difficult to revise as new information becomes available (Ackerman and Stewart, 1985). They may therefore build a sense of false security (Gunningham, 1997). The so-called new environmental policy instruments (NEPIs), such as price-based instruments, property right instruments and motivational and informational incentives, are promoted as alternatives to the traditional command-and-control approach (Jordan et al., 2003). This new approach is in line with the vision of the Flemish Minister of Environment, who stated in his policy letter that “a shift from an active and demonstrative government intervention to a private stimulating policy” will be needed (Peeters, 2004). However, also this new approach is criticized because it has difficulties to cope with free riders (Jordan et al., 2005) and with persistent irrational actors (Sinclair, 1997). Moreover, successful regulation with NEPI’s mostly takes place in the shadow of the law (Sinclair, 1997). Thus command-and-control regulation will still be needed, but more as a stimulus for companies to avoid a more coercive approach and as a back-up for situations where NEPI’s like persuasion, education, economic instruments and voluntarily agreements fail (Gunningham, 1997). Gunningham (1997) also emphasizes that in virtually all situations, a mix of instruments will be more effective than any single instrument.

Hence, the aim of this paper is (1) to evaluate the current instrument mix in Flanders with special attention to new environmental policy instruments; (2) to design options for a smart regulation for forest expansion in Flanders and (3) to estimate the acceptability of the new instruments at the political, official and civil society levels.

To select an appropriate instrument mix, the instrument selection guidelines of the instrument choice theory (ICT) will be used. The ICT will provide an idea of which instrument categories will be needed to design an appropriate instrument mix for forest expansion in Flanders. When the needed instrument categories do not exist in Flanders, new instruments must be developed or imported from other countries. The lesson-drawing or voluntary policy transfer literature will be fruitful in these explorations because they address the question of under what circumstances and to what extent a program that is effective in one place can be transferred to another (Rose, 1991). Finally, it is also important to check the political acceptability of the possible transferable policy instruments. The literature on legitimacy and support analysis will be fruitful in those explorations.

The study is an illustrative example of instrument choice and success for a land-based policy in the multi-actor and multi-level environment typical of a densely populated country like Belgium.

## Theoretical framework

### *Instrument choice theory*

It is important to give a definition of public policy instruments first: “these are a set of techniques by which governmental authorities wield their power in attempting to ensure support and effect social change” (Bemelmans-Videc et al., 1998). An important step in crafting a thoughtful policy is the choice of appropriate instruments (Rist, 1998). Theories of policy instrument choice have gone through several generations (Gogging et al., 1990) as theorists moved from the analysis of individual instruments (Salamon, 1981) to comparative studies of instrument selection (Bemelmans-Videc et al., 1998; Howlett, 1991) and the development of theories of instrument choice (Hood, 1986; Linder and Peters, 1989). Later on, theorists addressed a series of concerns involved in designing and adapting optimal mixes of instruments in complex decision-making and implementation contexts (Bressers and O’Toole, 2005; Eliadis et al., 2005). Thus, the new theory on policy instruments, ‘Smart Regulation’, centers on the questions of the ‘optimality’ (Gunningham and Gabrosky, 1999; Howlett and Rayner, 2004) or ‘coherence’ of instruments (Bressers and O’Toole, 2005) within the mixes of tools that comprise governance strategies. The requirements for these smart regulations are the following:

1. *Prefer policy mixes incorporating a broad range of instruments and institutions* (Gunningham and Gabrosky, 1999; Howlett and Rayner, 2004). All individual instruments have both strengths and weaknesses, and none are sufficiently flexible and resilient to be able to successfully address all environmental problems in all contexts. It is important to systematically consider the benefits of their mutual application. Similar arguments for regulatory pluralism apply with regard to institutions. Besides government and the regulated sector, a great range of institutional actors, including commercial and non-commercial third parties such as suppliers, customers and the growing cast of auditors and certifiers, exists and can assist in taking the weight off of government intervention. Thus, empower participants that are in the best position to act as surrogate regulators (Gunningham and Gabrosky, 1999).
2. *Prefer less interventionist measures.* The term ‘intervention’ has two principal components: prescription and coercion. Prescription refers to the extent to which external parties determine the level, type and method of the improvement. Coercion, on the other hand, refers to the extent to which external parties or instruments place negative pressure on a firm to improve its performance. Both components exert their influence on the intervention level. A high intervention level tends to score very badly on legitimacy. This is particularly the case in sectors such as agriculture with a history and culture of independence from, and a strong resentment of, government regulatory intervention (Gunningham and Gabrosky, 1999).
3. *Invoke motivational and informative instruments.* These instruments are so fundamental for a successful policy that they should be used in almost all circumstances and incorporated in almost all policy mixes (Gunningham, 1997). However, according to Barr and Cary (2000), information and education work best where targeted policy agents perceive self-interest in adapting the recommended measures. Otherwise, those instruments must be used in combination with others.
4. *Ascend a dynamic instrumental pyramid* to the extent necessary to achieve policy goals. This is based on two important considerations. First, a given instrument may be effective in influencing the behavior of some firms, but not others. Second, a particular instrument which, prior to its introduction, seemed likely to be

viable in this capacity, may, in the light of practical experience, prove not to be so. Thus, there is a need to build in regulatory responsiveness and instrument sequencing to increase dependability. The gradual escalation<sup>3</sup> to the top of the pyramid (coercive instruments) can be done by the government, the forest sector and third parties (Gunningham and Gabrosky, 1999).

5. *Maximize opportunities for win–win outcomes* (Gunningham and Gabrosky, 1999). A key challenge for policy-makers is to ensure that regulatory solutions optimize the opportunity for win–win outcomes and facilitate and reward enterprises for going 'beyond compliance', while also maintaining a statutory baseline and a ratcheting up of standards. An important fact in those considerations is that land owners will only be attracted to programs that help them achieve their ownership goals or enhance their own particular values regarding management (Kline et al., 2000; Koontz, 2001).

These insights stress the importance of context in understanding instrument choice and designing optimal or at least non-counterproductive instrument mixes (Bressers and O'Toole, 2005). Other important factors of this choice context are the previously existing arrangements and any long-standing preference for particular instruments that may exist in a specific sector (Howlett, 2004).

The selection of policy instrument(s) is based on the choice between often competing and most often conflicting values of effectiveness (degree of goal-realization), efficiency (input–output/outcome ratio), legality (equity and motivation of decisions), democracy (degree of participation) and legitimacy (acceptance by target group and politics) (Bemelmans-Videc et al., 1998). The importance of those criteria is dependent upon the context: e.g. efficiency will be an important consideration in climates of budgetary restraint, but is a less significant aspect in free-spending times (Howlett, 2004). Moreover, no single instrument exists with high values for all criteria (Salamon and Lund, 1989; Gunningham and Gabrosky, 1999). In addition to these "external" criteria, there are also "internal" constraints on instrument choice that must be considered (Howlett, 2004). That is, some instruments may work well with others – as is the case with self-regulation set within a regulatory compliance framework (Gibson, 1999; Grabosky, 1995) – while other combinations, such as independently developed subsidies and regulation (de Moor, 1997; Myers and Kent, 2001), may not. Both the "internal" and "external" constraints of instrument behaviour and selection must be taken into account in an effort to theorize regarding optimality in the design of policy mixes (Minogue, 2002).

#### Policy transfer

Starting in the nineties, there has been growing interest in the study of policy convergence (Coleman, 1994), policy diffusion (Majone, 1991), policy learning (Haas, 1992) and lesson drawing (Rose, 1991, 1993). All refer to different forms of policy transfer: "*a process in which knowledge about policies, institutions and ideas developed in one time or place is used in the development of policies, institutions, etc. in another time or place*" (Dolowitz and Marsh, 1996; Dolowitz et al., 2000). Policy transfer analysts refer to three different processes of transfer: voluntary transfer or lesson-drawing, negotiated transfer and direct coercive transfer (Evans, 2006). This research focus on the first, being a rational, action-

oriented approach to dealing with public policy problems that emerge from one of more of the following:

- the identification of public or professional dissatisfaction with existing policy as a consequence of poor performance;
- a new policy agenda that is introduced due to a change in government, minister or the management of a public organization; and
- a political strategy aimed at legitimizing conclusions that have already been reached or an attempt by a political manager to upgrade items of the policy agenda to promote political allies and neutralize political enemies (Evans, 2004).

Governments borrow policies, institutions, etc. with the expectation that this transfer will lead to policy success rather than policy failure. Of course, the underlying assumption is that policies that have been successful in one country will be successful in another. Dolowitz and Marsh (2000) suggest that at least three factors have a significant effect on policy failure. First, the borrowing country may have insufficient information about the policy or institution and how it operates in the country from which it is transferred (uninformed transfer). Second, although transfer has occurred, crucial elements of what made the policy or institutional structure a success in the originating country may not be transferred (incomplete transfer). Third, insufficient attention may be paid to the differences between the economic, social, political and ideological contexts in the originating and borrowing countries (inappropriate transfer).

Mostly, policies are transferred and properly implemented only insofar as they fit with existing institutional arrangements (Knill and Lenschow, 1998). Moreover, cultural similarity plays an important role in facilitating cross-national policy transfer. In their search for relevant policy models, decision-makers are expected to look for experiences of those countries with a high level of cultural similarity (Strang and Meyer, 1993). Also, similarity in socio-economic structures and developments has been identified as a factor that facilitates the transfer of policies across countries (Jänicke, 1988). Finally, ideological and resource similarities are necessary preconditions for policy learning (Dolowitz and Marsh, 1996).

#### Policy acceptability analysis

Legitimacy refers to the degree of actual support a government may realize for its choices because the actors involved perceive them as in correspondence with their own views, feelings or objectives (Bemelmans-Videc et al., 1998). This support can be passive or active (Hoogerwerf et al., 1993; Bogaert, 2004). Legitimacy also represents a political criterion that stresses that acceptance is crucial for actual effectiveness of a policy or program (Bemelmans-Videc et al., 1998). In our research, this definition of legitimacy will be used. Legitimacy or acceptability is also a necessity for any system of democratic government to allow the exercise of power without coercion (Schmitter, 2001; Connelly et al., 2006). However, legitimacy is not a given in any system, but is rather a construct that has to be maintained and reproduced by the power structures it in turn legitimizes (Beetham, 1993). Legitimacy is also created in a multi-actor and multi-level environment, and therefore it is important to distinguish the support of different actors on different levels (Bogaert, 2004). Bogaert (2004) and de Molenaar (1998) divided legitimacy into public and managerial acceptability. Public acceptability is further divided into social acceptability (individual citizens) and policy acceptability of the civil society (non-governmental organizations, trade unions). Managerial acceptability is further divided into official acceptability (public servants of municipalities, regions, federal and country

<sup>3</sup> This escalation is different from the more frequently used conflict escalation. Escalation in the sense of smart regulation means that the coerciveness of the instrument will increase (going from information to strict regulation).

levels) and political acceptability (democratic elected representatives). The acceptability levels of the different actors also influence each other, for example, social acceptability will influence political acceptability (Bogaert, 2004).

## Material and methods

### *Description of the socio-economic and political context in Flanders (northern Belgium)*

The Flemish forest expansion policy (including policy instruments) has been developed in a particular socio-economic and political context, which will be described in the next section.

Belgium is a federal state, divided into three regions (Flanders, the Wallonia and Brussels Capital region) and three communities (Flemish, French and German). Forestry, nature conservation and spatial planning were regionalized in 1980, and agriculture only in 2001. Before 1980, the forestry (including nature conservation) division was part of the Ministry of Agriculture. The regionalization created a separate Flemish administration for nature in addition to the new Flemish forest administration and the still existing federal agricultural administration.

Flanders, especially the central part between the major cities of Antwerp, Brussels and Ghent (Flemish Diamond), is very densely populated and has a high concentration of economic activities. This concentration expresses itself spatially in a very dense infrastructural network and an omnipresent urban sprawl. In addition, the regions bordering the Flemish Diamond and more remote areas around one or more smaller cities are often urbanized or still urbanizing (Leinfelder, 2004). Flanders is best described as an urban network of many relatively small urban centers (Kesteloot, 2003). Only 10–12% of the Flemish population lives in urban centers, while the majority lives in a suburban environment (Leinfelder, 2004). The overwhelming urbanization of the countryside or expansion of urban functions all over the countryside is considered to be the common enemy of agriculture, nature conservation and forestry, or the three open space sectors (Leinfelder, 2004). This open space is safeguarded against new developments, and agriculture, nature and forest areas in this open space are endowed with extensive development possibilities (Leinfelder and Van Den Abeele, 2007). This is a common strategy of Northwestern European countries, where the countryside is highly valued as space for production and consumption, and city and urbanization are perceived in a more negative way (Overbeek, 2006). The Flemish policy has generally considered agriculture a priori as an economic activity that ought to be provided with maximal spatial development possibilities, in contrast with the shift toward a broader countryside policy at the European level (Leinfelder, 2007). Nature spatial planning policy is based on (potential) ecological value, inspired by European as well as national/regional legislative initiatives protecting and strengthening networks of areas with outstanding natural values (Leinfelder, 2007). Despite this protective attitude, the urbanization of the Flemish countryside continues (Leinfelder, 2004). In addition, there are many conflicts between the three countryside sectors (agriculture, nature conservation and forests). Also, their influence on the political process differs and decreases from agriculture to nature conservation to forestry. The agriculture sector had and still has a strong link with the Christian Democratic Party (CD&V). This party is usually in power, with the exception of the periods of 1999–2004 (Flemish level) and 1999–2007 (federal level). In 1995, there was a fierce border conflict between the nature and agricultural sectors resulting in the disappearance of the Green Core Structure (GHS), an ecological network idea contained within the political agenda (Bogaert and Gersie, 2006). All new policy devel-

opments from this date forward must thus be made in compromise with the stronger agricultural sector. Also, forest policy (including forest expansion policy) holds a secondary position relative to agriculture policy. Finally, there are also conflicts between the nature conservation and forest sectors, with the first of these focusing more on 'open' types of vegetation and less on woodlands (Van Herzele, 2006).

Thus, Flemish forest expansion policy has developed in a difficult socio-economic and political context. Throughout the 1990s, the forest expansion aim was used continuously in forest policy documents to advance the cause of forest expansion, a prime example being the 'Long-term Forestry Plan' (1993). In 1997, this resulted in the legal recognition of this aim via the inclusion of a forest expansion target in the Spatial Structure Plan Flanders. However, this recognition hardly resulted in an effective implementation. The main policy failures are (1) the local resistance of farmers; (2) the influence of the relevant constituency groups (i.e., farmers) on the political leaders (upper-level and local); (3) imperfect communication; (4) inconsistencies with the agricultural and nature legislation; and (5) insufficient financial support of farmers. Many of the failures are a result of the secondary position that forest policy holds relative to agriculture policy and the use of separate sectoral visions instead of an integrated rural vision (Van Gossum et al., 2008).

### *Data collection*

Data were collected by conducting 26 in-depth interviews and four expert interviews,<sup>4</sup> analyzing 28 documents and executing a web-based search to find possible transferable instruments for forest expansion in Flanders. The in-depth interviews were held with key actors from political parties, the Flemish Parliament, cabinet (advisors) of the Minister of Environment, administrations, interest groups, experts, environmental non-governmental organizations and other stakeholders (see Table 1). The expert interviews were conducted with Flemish experts on forest expansion policy instruments. Because of the high specificity of the data that was needed in this phase, the number of possible expert respondents was low. All interviews were tape-recorded and transcribed. The analyzed documents were policy plans ( $n = 5$ ), legislation ( $n = 11$ ), policy evaluations ( $n = 3$ ), doctoral dissertations ( $n = 2$ ), policy documents and letters ( $n = 7$ ) (see Appendix A). The web-based search was based on countries with a high similarity in culture, socio-economic structure and development, population density and forest cover to improve the policy transfer success. England, Denmark and the Netherlands satisfy these requirements. The collection of multiple data types makes data triangulation possible and will increase the validity of the findings (Yin, 2003).

### *Data analysis*

During our data analysis phase, the qualitative data analysis software NVivo was used. For each research phase, the coding was based on the theoretical framework already described. In the first phase, the six requirements of smart regulation ("instrument choice theory" section) were used to check the current state of policy instruments for forest expansion in Flanders and to identify the most important instrument gaps in the Flemish forest expansion

<sup>4</sup> The four interviewees are the head of the forest expansion team of the Nature and Forest Agency, a juridical expert on Forest and Nature Policy and two members of the Flemish Forest Organisation involved in private-private partnerships, i.e. cooperation between two or more different private organizations, with a forest expansion aim.



**Table 1**

List of the interviewed political organizations (category 1), administrations (category 2), organizations of civil society (category 3) and experts (category 4).

Acronym	Name of organization or knowledge field (in Dutch)	Translation	Category
ANB	Hoofdbestuur Agentschap voor Natuur en Bos	Nature and Forest Agency (head office)	2
ARP	Entiteit Ruimtelijke Planning van het Agentschap RO-Vlaanderen	Spatial planning administration of the Flemish Region	2
BB	Boerenbond	Farmers Union	3
BL	Bebossing van landbouwgronden	Nature and Forest Agency—agricultural land afforestation team (2 persons)	2
BUT	Bosuitbreidingsteam	Forest Expansion Team (2 persons)	2
CD&V	Christen Democratisch & Vlaams	Christian Democratic party	1
CE	Kabinet van Leefmilieu	Cabinet of Environment (advisor of the Minister of Environment)	1
EFN	Inverde	Educative forest and nature centre <sup>a</sup>	3
Exf		Expert – forest expansion	4
Exl		Expert – legislation	4
Exps		Expert – public support	4
Exsp		Expert – spatial planning	4
FG	Bosgroepen	Forest groups <sup>b</sup> (3 persons)	3
Groen!	Groene partij	Green party	1
LV	Landelijk Vlaanderen	Flemish Forest and Landowners Association	3
MINA	Milieu- en Natuurraad Vlaanderen	Flemish Nature and Environmental Council	3
NARA	Natuurrapport-team van het Instituut voor Natuur- en Bosonderzoek	Nature evaluation team of the Nature and Forest Research Institute	2
NP	Natuurpunt	Main nature conservation organization in Flanders	3
NVA	Nationale Vlaamse Alliantie	National Flemish Alliance	1
SP.a	Sociaal progressief alternatief	Socialist-Progressive party	1
VB	Vlaams Belang	Flemish Nationalist party	1
VBV	Vereniging voor Bos in Vlaanderen	Flemish Forest Organization	3
VHB	Vlaamse Hoge Bosraad	Flemish Forest Council	3
VLD	Vlaamse Liberalen en Democraten	Liberal party	1
VLM	Vlaamse Landmaatschappij	Flemish Land Agency	2

<sup>a</sup> Inverde is the main education center regarding forest, nature and green areas, focusing on education of those interested in forest, nature and green areas on the one hand (forest owners, volunteers, ...) and continuous on-the-job learning of professionals active in forest, nature and green areas on the other. One of the tasks of Inverde is to translate research results into education packages suitable for forest owners as well as employees of the Nature and Forest Agency.

<sup>b</sup> Within forest groups, private and local public forest owners cooperate to develop more effective management of their forests. The forest groups are the main actors for management advice and support for private forest owners.

policy. In the second phase, the selected instruments were investigated with regard to (1) the smart regulation gaps they could fill and (2) their transferability by comparing the context, the current policy process status in Flanders and the essential juridical adjustments needed to implement them in Flanders. Finally, the policy acceptability of the new instruments at the political, official and civil society levels was checked in the third phase. Without adequate policy acceptability, the instruments will never reach their targets.

## Results and discussion

### Smart regulation: current state and gaps

According to the first requirement of smart regulation, it is important to incorporate a broad range of instruments and institutions into the policy mix. The instruments used in Flanders are:

- grants: for land purchase by municipalities and provinces and for afforestations by public and private actors,
- income compensation for private actors (higher for farmers),
- direct land purchase by the government,
- designating of forest expansion areas (rural planning): currently almost no forest expansion areas exist, and
- restriction of deforestation as a regulative instrument: deforestation is only allowed under certain circumstances and must be compensated (in cash or in natura). At the moment most compensations are made in natura. The consequence of this is that the Nature and Forest Agency must find additional land to realize the deforestation compensations.

The Nature and Forest Agency (ANB) is in fact the only involved institute, but some other organizations have roles, mostly on an ad hoc basis, voluntarily and for small projects:

- the Flemish forest organization (VBV) works together with different organizations, like Regional Environmental Care<sup>5</sup> (RMZ), the forest service (ANB) and a cancer fund raising organization<sup>6</sup> (KOTK), the Peace movement and the White Children movement,<sup>7</sup> to realize their own organization aim of forest expansion (resulting already in a total afforestation of 190 ha);
- Natuurpunt (a nature organization) with a labor union, an insurance company and all companies of the industrial park of Oostende grouped together in a cooperative partnership, “Buiten-goed,” to realize the urban forest of Oostende; and
- the Chamber of Commerce of the province ‘Vlaams Brabant’ with the Move for Climate project: this project promotes Climate Neutral Driving in cooperation with the Dutch Climate Neutral Group ([www.moveforclimate.be](http://www.moveforclimate.be) 14/09/2006).

Thus, at this time, traditional instruments are mostly used (regulations, grants, purchase and compensation). New environmental policy instruments (NEPIs) are only used on an ad hoc basis, and institutional pluralism, i.e., the presence of regulators other than the government, is non-existent. This instrument gap is a first point of attention for the transfer analysis.

The second requirement of smart regulation is that less interventionist measures are preferred. Thus, the best sequence of the used instruments will be afforestation grants and income

<sup>5</sup> RMZ is responsible for the waste processing and waste incineration of the Flemish province “Limburg”. To compensate for their CO<sub>2</sub>-emission, they give the Flemish Forest Organization a budget to buy land to afforest.

<sup>6</sup> KOTK sell trees to get funding for cancer research. ANB provide land to afforest and the young trees. The VBV organises the public event (quiz with Flemish famous persons, child animation, etc.). Because of the link with cancer, the new forests are more publicly acceptable.

<sup>7</sup> The White Children movement is founded as a reaction to the failure of Justice to end child disappearance, especially in the case of paedophilia. The new forest has more a symbolic meaning as a way to remember the disappeared children.

compensation, purchase grants and direct purchase. At this time, the government wants to realize 55% of the forest expansion goal through direct purchase and only 24% through granted afforestation by private partners. Thus, a possible solution is to increase the involvement of the private sector in the forest expansion policy.

The third requirement of smart regulation is that informational and motivational instruments be available. The current situation is that other public actors can ask for advice concerning their afforestations from the forest expansion team of the Nature and Forest Agency (ANB) and the forest expansion support team (TOBU) of the Nature and Forest Research Institute (INBO). At the moment, there is no structural support for private actors who want to afforest their land. Ad hoc advice is given by private forest officials, forest group coordinators and some forest expert companies. Thus, there is a need for more information on structural afforestation for private actors.

According to the fourth requirement of smart regulation, it is necessary to have a gradual escalation from less coercive instruments to very coercive instruments. The forest expansion team already uses this idea. The focus is on the voluntary land market (less coercive). After buying land to afforest, they work with a compromise model to reduce the negative impacts for the farming tenants (less coercive). When the tenants disagree with the proposed model, the legislation (tenure law) makes it possible to afforest after legal notice (more coercive). When the targets are not reached on a voluntary basis, the government has the legal power of expropriation (very coercive). In this sense, this requirement is fulfilled. However, expropriation will be not used for forest expansion. Furthermore, each purchase requires endorsement by Inspection of Finance. This retards governmental purchases on the voluntarily market and results in limited use of the combined budget of government land purchase and compensations. The current instrument mix can be improved upon by changing the policy implementer from the government to a more flexible private partner in order to buy land to afforest without the restrictive purchasing procedure.

The fifth and final requirement of smart regulation is to maximize opportunities for win–win outcomes for all partners. Farmers are key actors in realizing the forest expansion strategy. When farmers afforest their land, the government does not have to purchase it, and in general the forest expansion will be cheaper (win for the government). The farmers, on the other hand, must gain some advantage as well. At this time, the financial support of the Flemish government is too low to convince farmers and other private landowners to afforest their land (Meiresonne, 2001). Income support is only paid for five years for afforestations with poplars, conifers, and non-indigenous broad-leaved species. For farmers, this period is too short to guarantee income security. In addition, agricultural grants are too competitive. Furthermore, Flemish farmers are rather opposed to afforestation (even classic poplar cultivation); only 13% of Flemish farmers are interested in this opportunity. Possible explanations for this are: insecurity concerning 'land designation', fear of a decreasing value of the land, strong beliefs that a reconversion to agricultural land will be legally impossible with time, fear of game damage to their agricultural crops, and the 'long' rotation time (15–20 years for poplar) (Meiresonne, 2001). On the other hand, they seem interested in short rotation forestry for energy purposes. Furthermore, farmers give the following reasons for not getting involved in agri-environmental measures in the Netherlands: untrustworthy government, insufficient compensations, lack of continuity, rules are unclear, not flexible, vagueness concerning payments and bureaucracy (Groeneveld et al., 2004). New instruments that address these shortcomings are thus needed.

**Table 2**

Fulfilled smart regulation gaps for the potential transferable Dutch and English instruments.

Instrument	Smart regulation requirements
Expert advice (England and the Netherlands)	<ul style="list-style-type: none"> <li>- a NEPI</li> <li>- institutional pluralism: possible involvement of a private partner (this is the case in the Netherlands, but not in England)</li> <li>- structural afforestation information support</li> </ul>
Image building (England and the Netherlands)	<ul style="list-style-type: none"> <li>- win–win outcome: decrease of government expenditures and an increased support base through the involvement of companies in the project</li> </ul>
Flexible grant scheme (England)	<ul style="list-style-type: none"> <li>- involvement of private sector</li> <li>- win–win outcome</li> </ul>
Farmers for Nature (the Netherlands)	<ul style="list-style-type: none"> <li>- a NEPI</li> <li>- involvement of the private sector</li> <li>- opportunities for win–win outcome for farmers</li> </ul>
Red for Green (the Netherlands)	<ul style="list-style-type: none"> <li>- a NEPI</li> <li>- involvement of the private sector</li> <li>- a flexible partner to buy land to afforest</li> <li>- win–win outcome</li> </ul>
New rural estates (the Netherlands)	<ul style="list-style-type: none"> <li>- a NEPI</li> <li>- involvement of the private sector</li> <li>- a flexible partner to buy land to afforest</li> <li>- win–win outcome</li> </ul>
Carbon benefits (the Netherlands)	<ul style="list-style-type: none"> <li>- a NEPI</li> <li>- institutional pluralism: involvement of certifiers</li> <li>- involvement of the private sector</li> <li>- flexible partner to buy land to afforest (in many cases)</li> <li>- win–win outcome: cheaper realization for the government of the forest expansion targets and for the companies of their Kyoto targets</li> </ul>

Summarizing the most important gaps in Flanders' forest expansion policy, according to the "smart regulation conditions":

- new environmental policy instruments are only used on an ad hoc basis;
- institutional pluralism is non-existent;
- insufficient involvement of the private sector;
- no structural afforestation information supply for private actors;
- a lack of a flexible partner to buy land to afforest; and
- no opportunities for win–win outcomes for farmers.

#### *Policy transfer: new instruments*

A two-step procedure will be used for the policy transfer analysis. First, a description of the forest expansion approaches in Denmark, England and the Netherlands will be given. Second, the suitability to solve the current smart regulation gaps and the transferability of potential new instruments will be examined.

The Danish program aims to double its forest area within the next 80–100 years; this requires a yearly increase of 5000 ha of forest (Helles and Linddal, 1996). Half of this increase is planned to come from private woodlands, mainly on former agricultural land and supported by an afforestation scheme providing grants for field afforestation. The other half is planned to be state afforestation (Madson, 2002). However, the planned afforestation was not

realized for the period 1989–1998; only 17,686 ha were afforested instead of the planned 40,000–50,000 ha (Kirkebæk and Thormann, 2000). The grant for field afforestation supported only 2293 ha (Kirkebæk and Thormann, 2000) and is quite similar to the Flemish grant. However, there is one important difference: the Danish political system (national, regional and local levels) used a zoning system to prioritize certain areas for afforestation and discourage and even prohibit it for other areas (Madson, 2002). In theory, the possibility of a zoning system (forest expansion areas) also exists in Flanders but is not used. Thus, the Danish case does not result in new potential instruments for Flanders.

The strategy for England's trees, woods and forests emphasizes the importance of successful approaches like the National Forest as inspiration for others to improve the places where people live (DEFRA, 2007). The National Forest is set to transform some 200 square miles of the Midlands of England with a mosaic of woodland, open country, farmland and settlements. The tree cover will increase from 6% to 33% of the land area, resulting in a forest expansion of 13,500 ha of new planting with around 70% of this in the first 15 years (Williams, 2006). At this moment, 5900 ha are already realized, resulting in a current tree cover of 18% ([www.nationalforest.org](http://www.nationalforest.org) 08/08/08). This program, implemented by the National Forest Company (NFC), is quite successful and used a diverse mix of policy instruments including financial instruments (one acre wood scheme,<sup>8</sup> 500–2000 trees scheme<sup>9</sup> and the changing landscape scheme<sup>10</sup>), communicative instruments for land owners (information and expert advice by planning and effective realization of the project) and for the general public (website, book, different forest related events, education especially for schools, volunteer opportunities) and sponsorship (image building for companies and plant a tree<sup>11</sup> for individuals). Some of these instruments are already in use in Flanders, such as 'plant a tree' for special occasions and special afforestation events (e.g. Peace, White Children and KOTK forests). Potential useful ideas and instruments for Flanders are expert advice, image building and a flexible grant scheme.

The Dutch aim is to increase forest area to 400,000 ha in 2020 (LNV, 2000). The forest area increased from 334,000 ha in 1983 to 360,000 in 2001, indicating that the planned increase to 400,000 ha in 2020 will be very difficult. However, it is still more successful than the Flemish case. In the Netherlands, a more diverse mixture of policy instruments is used. These include grants, expert advice, carbon benefits, image building, Red for Green,<sup>12</sup> new rural estates<sup>13</sup>

and Farmers for Nature.<sup>14</sup> Most instruments, with the exception of grants, are not used in Flanders and have the potential to be useful for Flanders.

In the next part of this section, we will discuss to what extent these potential new instruments fulfill the current smart regulation gaps (Table 2) and to what extent these instruments are transferable to Flanders. All potential new instruments fulfill some of the current gaps and thus have potential to improve the current Flemish situation.

In Flanders, expert support can be given by the forest expansion team (BUT)<sup>15</sup> or by the forest group.<sup>16</sup> Neither requires legislative changes. However, when the support includes field afforestation by the government, a change in article 37 of the Forest decree will be needed. Currently, afforestation of private land by the government is forbidden by this article. It is also recommendable that forest expansion be added as a target in the statutes of the forest group. Currently, one forest group, 'Vlaamse Ardennen,' explicitly states the forest expansion target in its statutes. Therefore, the transferability of expert support seems to be high.

Image building or funding of afforestation by companies needs no legislative changes. However, in Flanders, nature conservation and forest NGOs evaluate this support as more project-dependent, and some are against it. In any case, a deontological code will be useful to anticipate potential green-washing practices of companies. Currently, some companies, like Electrabel, already sponsor Natuurpunt, the largest Flemish NGO. Thus, the transferability of image building seems to be high.

The changing landscape scheme of the National Forest is more difficult to transfer. This grant scheme covers the cost of new woodlands and associated habitats in one grant request. In Flanders, this will be not possible because the grant requests for associated habitats (nature) and forests must be made separately. This is a consequence of the fact that the integration between the nature conservation and forest sectors has only recently started and the legislation (including grant schemes) is still separate. In adopted form, only funding afforestation, the transferability is higher. However, it still requires an important change in the current grant scheme, which is based not on a tender system, but on a tree-species-dependent funding of afforestation projects. A possible way to create this scheme in Flanders is to set up a forest fund that is financed by public and private money. This fund could finance afforestation projects under certain conditions. However, to be successful, it is important that the known inconsistencies of agricultural and nature legislation be resolved.

The Dutch instrument Farmers for Nature is an improved version of the current Flemish agri-environmental measures. The Dutch instrument is also accepted by Europe; this is important because a government check support<sup>17</sup> is obligatory for all agriculture grant

<sup>8</sup> The National Forest Company (NFC) provides 420 trees with canes and guards absolutely free and provides a guide to planting and maintenance.

<sup>9</sup> The NFC will help to design and plan the woodland and will supply the trees, arrange to have them planted, and maintain them for 18 months—free of charge.

<sup>10</sup> This is a flexible scheme for the creation of new woodlands and associated habitats with at least 50% woodland creation and a minimal area of 1 ha. The costs for woodland and habitat creation and management are 100% covered.

<sup>11</sup> Plant a tree is a program in which individuals can buy a tree in celebration of a special occasion, such as a wedding, the birth of a baby, a gift for a friend, an anniversary or in memory of a loved one.

<sup>12</sup> Red for Green is a policy instrument which allows a profit-generating activity like real estate development on a place where it is normally legal impossible because the spatial designation (agriculture) do not allow this possibility. This authorization results in a substantial benefit for the developer because the spatial designation is changed from agriculture to residential area. The government gives this authorization only when the project developer spends a large part of this benefit in the simultaneous realization of a new forest or nature area close to the place where the real estate is developed (Evers et al., 2004).

<sup>13</sup> New Real Estate is the permission for the development of a limited number of housing units in the rural area in exchange for a considerable amount of new, publicly accessible, nature. The minimum area is 5 ha, and 90% of the area must be 'new', public accessible nature (<http://www.brabant.nl/Wonen/14/09/2006>). The most important difference between Red for Green and New Rural Estates is the scale, the former consisting of larger projects.

<sup>14</sup> Farmers for Nature is an improved version of the current agri-environmental measures that creates a compromise addressing the higher mentioned complaints of farmers. It is an agreement between the government, the landowner and the farmer. The main characteristics of the instrument are: (1) the farmer remains an independent entrepreneur; (2) an important part of his income is generated through the production of nature and landscape; (3) the agreement is (in theory) everlasting; and (4) the agreement is established in an easement, coupled with the land (Stortelder et al., 2001).

<sup>15</sup> BUT is the forest expansion team of the government and their aim is to realise a large part of the forest expansion aim by buying agriculture land to create new forests. This team is very experienced and a good source for afforestation information.

<sup>16</sup> The forest groups are the main actors for management advice and support for private forest owners.

<sup>17</sup> The government support check is a consequence of article 87 of the EU-treaty: farming companies can only be granted under conditions. In July 2006 the EU

**Table 3**

Political acceptability of the potential transferable instruments as rated by the respondents (see Table 1 for the full names of the different organizations' acronyms); a sign was only given when the respondent had a clear opinion concerning the investigated instrument).

	Expert advice		Image building	Flexible grant scheme	Farmers for Nature	Red for Green	New rural estates	Carbon benefits
	BUT	Forest group						
ANB	–	+	±	+	±	±	±	±
ARP	+	+		±	±	–		
BB	+	+	–	±	±	–	±	±
BL1	–			+	±	±	±	+
BL2	–				±	±		
BUT		+	±	+	±	±	±	±
CD&V	+	+	–	+	±	–	±	+
CE	+	+		+	±		±	+
EFN	–	+	±	+	±	±		+
Exf	–	+		+	±		+	+
Exl		+	±	+	±		±	±
Exps	+	+	±	+	±	±	–	±
Exsp	+	+		+	±	±	+	+
FG	–	+		+				
Groen!	+	+		+	±	±	±	±
LV	–	+	±	+	±	±	+	+
MINA	+	+	±	+	±	–		±
NARA	+	+	+	+	+	–	–	
NP		+	±	±	±	–	–	±
NVA	+	+	+	+	±	–	±	+
SPa	+	+		+	±	±		
VB	+	+	±			–	–	±
VBV		+	±	+	±	±	±	+
VHB		+	+	+	+	±	±	±
VLD	+	+		+	±	+	+	+
VLM	–	+	+	+	±	±	–	+
Pro	13	24	4	21	2	1	4	11
Contra	8		2			8	5	
Conditional			10	3	22	13	11	10

schemes. An advantage for transferability is that agriculture policy is almost the same in most EU countries (common agriculture policy). An obstacle to transferability is a difference in strength of the agriculture sector, namely that it is stronger in Flanders than the Netherlands (Bogaert and Gersie, 2006). This difference is important because in Flanders the resistance against new instruments is sometimes dictated by strategic considerations. The farmers' organizations adopt this protective attitude because the agricultural sector is subject to increasing environmental pressure and decreasing financial support. Thus, they will not participate in instruments proposed by their opponents, even if those instruments are very attractive. To accept this instrument, the farmer must also change his mentality. A slow but certain evolution is ongoing in Flanders: the new generation of farmers is sensible to combining forest, landscape and nature management into operational farm management. Farmers acknowledge that this change can create some new economic opportunities. Thus, in these circumstances, there are some opportunities for a successful transfer of this instrument to Flanders.

The instruments Red for Green and new rural estates are both spatial planning instruments. Their transferability will depend on the similarity of spatial planning in the Netherlands and Flanders. Spatial planning was less strict in Flanders than in the Netherlands, resulting in more houses scattered across the open space and ribbon-building in Flanders. Therefore, the fear is high that these new instruments will further increase the fragmentation of open space. Even in the Netherlands this fear exists. However, through a clear description of the concept and the preconditions, the support of, for example, new rural estates increased

([www.noorderbreedte.nl](http://www.noorderbreedte.nl), 18/09/2006). These preconditions are (1) at least 30% of the estate must consist of new sustainable forest; (2) 90% of the estate should be publicly accessible; (3) the new estate is not an impediment to the existing agriculture and (4) the new estate may not lead to new restrictions (Loonstra, 2002). In the Netherlands, only a small number of the submitted proposals have been accepted (Loonstra, 2002). Currently, policy-makers are discussing the usefulness and format of these instruments on the Flemish level. The Flemish Minister of the Environment has explicitly announced in his policy letter that he will develop a concept for rural estates (Peeters, 2004). Also, many of the elements included in Red for Green are already in use in Flanders, such as the compulsory measures to be realized when parceling an area and the plan profit and plan losses-regulation.<sup>18</sup> Thus, the transfer of Red for Green will be easier when these elements are incorporated.

Some companies, like Regional Environmental Care, already compensated their carbon emissions on the voluntary market. However, this was only made possible by the fact that this company contacted the Flemish Forest Organization to find land to afforest. To transfer the Dutch system, it will be necessary to allow an additional grant for carbon benefits besides the existing afforestation grant and to assign or establish an organization that links supply and demand of carbon credits. For the obligatory market under the Kyoto protocol, a subscription by Flanders of the afforestation/reforestation option<sup>19</sup> is also needed. This option requires a

<sup>18</sup> Through 'plan losses regulation,' the individual owner will be compensated by the government when the land designation of his/her ground changes from a high value (like residential area) to a low value (like nature, forest or agriculture). The 'plan profit regulation' acts the other way round.

<sup>19</sup> Article 3 of the Kyoto protocol is important for forest expansion: 'The net changes in greenhouse gas emissions by sources and removals by sinks resulting from direct human-induced land-use change and forestry activities, limited to afforestation,



measurement of the verifiable change in carbon stocks due to forest creation in each commitment period. The costs to measure this for the strong fragmented Flemish forest area is much higher than the expected gains. Because of this high transaction cost, Flanders will not subscribe to this option (De Schepper, oral communication). Thus, the transferability of carbon benefits is only high for the voluntary market.

#### *Policy acceptability of new instruments*

In Table 3, the acceptability of the instruments discussed as rated by the interviewees is given. The most accepted instruments are expert advice, the flexible grant scheme and carbon benefits. The other instruments are less accepted. In the next paragraphs, we will focus on the acceptance of each instrument in more detail.

Expert support is considered a good instrument because training or education increases the effects of the other forest expansion instruments. The interviewees also emphasized that the forest group, an independent association of private forest owners who give management advice to its members, is the most appropriate organization (Table 3). The independence of the forest group is important because private owners show a large aversion to the administration in general. Another advantage of the forest group is that the forest owner would only have one contact point for forest management and forest expansion topics. However, the BUT-team, a specific team for forest expansion at the Flemish Forest Administration, remains important as a forest ambassador with a lot of expertise. The task of the BUT-team and the Forest Administration in general is setting up conditions for and facilitating forest expansion. The importance of expert knowledge to support the implementation of other instruments is confirmed by many authors (Jones et al., 1995; Barden et al., 1996; Van Gossum et al., 2005). Forest groups are suitable for this job because (1) they enhance the motivation of private owners regarding afforestation and reforestation (Kittredge, 2005); (2) they share knowledge and experience with the owners (Van Gossum et al., 2005); and (3) they distribute information to and educate private owners (Barden et al., 1996).

Almost all interviewees supported the forest fund (flexible grant scheme). For the spatial planning administration, it is very important that the location of the forest correspond with the spatial executive plan, a planning document that defines the future designation of land in Flanders.

The additional financing of forests through carbon benefits is also considered an appropriate instrument by many interviewees (Table 3). The farmers' union can agree on its suitability when agricultural production is also taken into account for carbon benefits. However, the idea of afforestation to compensate for carbon emissions is not fully supported by environmental organizations because the climate problem is not effectively solved after the fact, but should be solved at the source by energy-saving measures. The environmental organizations will not promote this instrument and can only accept it under certain conditions. These are:

- no negative effect for nature (thus not on biodiversity-rich grassland),
- do not have lower costs than other carbon measures, and
- the forests are sustainably managed.

reforestation and deforestation since 1990, measured as verifiable changes in carbon stocks in each commitment period, can be used to meet the commitments under this Article of each Party included in Annex I".

Most interviewees (Exps, LV, NVA, CD&V, BB, VHB, EFN, ARP, MINA, CE, NARA, BL, VLD, VB, V, Exl)<sup>20</sup> find Farmers for Nature a solid instrument with many possibilities. However, most of them also expect that the feasibility will be low. Some respondents (BB, Exsp, BL, VB) emphasize that the instrument Farmers for Nature is a bridge too far for most farmers. Only some individuals, such as hobby-farmers, farmers without successors and farmers with low productivity land, will be interested (BB, Exsp, BL, VB). The acceptance of the instrument requires at least one generation of farmers (BB, BL). In addition, the farmers as a group and the farmers' organizations will be against this concept because of the already mentioned strategic considerations. Furthermore, to convince individual farmers, the compensation must be sufficient because farmers, as much as anyone, do not like the prescription of easements on their land. However, the most important problem of successful use of the instrument Farmers for Nature is that farmers think that forestry and agriculture are antagonistic and that afforestation is a sign of incompetence. This is confirmed by Kassioumis et al. (2004) for Kolindros, an agricultural area with a low forest index in Greece.

More controversial instruments are Red for Green, new rural estates and image building. The idea of Red for Green is a debatable and good principle (LV, EFN, Groen!, CD&V, ANB, SP.a, BL, VHB, VB, VLD). It has a number of advantages:

- the simultaneous creation of new space both for housing and industry and for nature and forest (SP.a);
- an effective realization of new 'green' space (BL).

But the instrument carries also some risks:

- In Flanders, Red for Green will be connected quickly with allotment<sup>21</sup> and land speculation<sup>22</sup> (LV, Exps), which will increase the parceling of the open space (LV).
- In the Netherlands, Red for Green is used as an excuse to build up the open space (ARP). The government should absolutely prevent new residential areas or industry in the open space for a small new green area (ARP, NARA, EFN, Exsp).

Because of these risks, some interviewees are resolutely against this instrument (BB, ARP, NARA, Exsp). An important aspect is the scale size: the instrument Red for Green is only appropriate for large development projects, industrial projects or companies (CD&V, VHB, VLM, Exf, Exl).

Also, new rural estates can be a good concept if large land areas would be available in the future and with an obliged public accessibility of the main area of the estate (Exf, ANB, BUT, VLD, Groen!, LV). Moreover, the quality of life of the surrounding area may not decrease, and the realization of the new estate must be spatially feasible (BUT, CD&V, NV-A, VHB, VB, ANB, CE). Some interviewees (BB, ANB, CE) wanted to await further evolution before they make a decision on their position. In any case, this instrument must be controlled via good spatial planning and appropriate policy (ANB, CE, Exl).

Additional financing through companies' image building is judged differently. The Christian Democratic Party (CD&V) and the

<sup>20</sup> Between parentheses, the interview source(s) will be referred to by their acronym. In Table 1, the full names of the organisations are given.

<sup>21</sup> Allotment is a possibility in the urban development law of 1962, which gives the buyer certainty to build a house on his/her purchased parcel.

<sup>22</sup> Land speculation takes place when there is a belief that cheap ground (forest, nature, agriculture) will become much more expensive (housing, industry) through a change of its planning designation.

Farmers Union (BB) are contra. For Natuurpunt (NP, the largest nature organization in Flanders), image building is only possible on a project basis. On the other side, the forestry expert and NV-A support the idea; the VBV and Vlaams Belang (VB) believe that this type of fund will increase public support of afforestation and, according to ANB and NARA, a demand already exists. The expectations are that the acceptance of image building will increase in the future and will be used to realize forest expansion. This expectation is very recently confirmed by the uptake of image building option in the million tree campaign of the Flemish forest organization (VBV). This campaign is supported by the Flemish forest service (ANB).

## Conclusion

Instrument choice theory gives a good idea of which new policy instruments are needed for a better instrument mix. The existing Flemish instruments are mainly classical instruments, and their coerciveness is also high. New environmental policy instruments are only used on an ad hoc basis for small projects. In order to increase forest policy effectiveness, efficiency and legitimacy, the need exists to extend the current mix with instruments and especially new environmental policy instruments (NEPIs) oriented to private actors that inform them or create win-win situations. The return for the government can be, among other things, a cheaper realization of their target or a flexible land purchase. Special attention must be given to instruments for farmers, who are important key actors in the realization of this policy. Possible transferable instruments are expert advice, image building, flexible grant scheme, Farmers for Nature, Red for Green, new rural estates and carbon benefits.

However, not all of the suggested instruments are acceptable to politicians, officials and civil society. Instruments with high acceptability are the carbon fund, flexible grant scheme and expert support (especially by forest groups). Farmers for Nature is a promising instrument, but farmers (the target group) will probably not be interested because farmers think that forestry and agriculture are antagonistic and that afforestation is a sign of incompetence. Regarding the instruments Red for Green, new rural estates and image building, no conformity exists between the interviewees. Hence, the smart regulation requirements of need for information (expert advice), the involvement of other institutional actors (certifiers through the carbon fund and forest groups through the expert advice) and insufficient involvement of the private sector (carbon fund, flexible grant scheme and expert support) can largely be solved. There exists, however, no practical solution for the other smart regulation requirements. In our case, there is the win-win requirement for farmers and a need for a flexible partner to buy land to afforest. Thus, forest expansion in agricultural areas will still take place through land purchase and not through cooperation with farmers. This land purchase process will still mainly take place with the government as the main actor and not in cooperation with private actors (like real estate agents).

Thus, at this moment, it is only possible to partially improve the instrument mix. However, this does not mean that the suggested changes will be not possible in the future. Continuity or incremental change is characteristic of most public policy (Meijerink, 2005). A possible trigger for this policy change is the gradually changing character of the rural area from a productive to a consumptive area or a change from an agri-ruralist discourse (focus on primary production) to a hedonist discourse (rural area as garden of citizens) (Elands and Wiersum, 2001). In the hedonist discourse new forests areas should be created and incorporated into the rural areas as a mean to provide both experience of nature and tranquility for urban people (Mormont, 1987; Elands and Wiersum, 2001). This hedonist

discourse corresponds completely with the Flemish governmental motives to expand the forest area (recreation and biodiversity conservation) and will therefore probably strengthen the policy implementation of this aim. Nevertheless, also when the hedonist discourse predominated, it stays important to create a win-win situation for farmers. Possibilities are product diversification with bed & breakfasts and farmyard campsites (income from recreation activities) and the policy instruments new rural estates and red-for-green. These instruments create new forests and nature and increase thus the rural attractiveness (win for the general public and the government) and it gives farmers the possibility to transform their farm to a rural estate and/or generates income because the government allows additional real estate development (win for the farmer). The expectation is that also the support for these instruments will increase, when the rural discourse change and that this will result in the desired forest expansion.

Our approach to use the instrument choice theory, the policy transfer theory and the legitimacy theory in sequence, was very fruitful for our analysis. Using this approach, it was possible not only to indicate regulation gaps, but also to give design options which are or seem political acceptable. However, this research has also demonstrated that the smart regulation approach is *vulnerable* because it heavily depends on the willingness of private actors to constructively contribute to the entire regulation pyramid. With that, private actors have high 'veto power'. In our case, it turned out that one interest group, the farmers, could block the entire policy under consideration. Of course, a government can overcome this with power interventions, forcing a certain interest group to obey. However, this strategy is, of course, in opposition with the smart regulation approach.

This research also confirms the importance to take difference in context between the originating and borrowing country into account when a policy instrument is transferred (Dolowitz and Marsh, 2000). This difference in context can explain the Flemish resistance against the Dutch instruments 'new rural estates' and 'Red for Green'. Flanders is characterized by poor spatial planning characteristics, which resulted in ribbon building and a fragmentation of the open space, and result in a general belief that these NEPIs will further enhance this fragmentation process. In contrast, the Dutch spatial planning was and is taken place in rather strict way and this result in less fragmented open space and a higher acceptance of these instruments.

## Acknowledgements

This research was funded by Ghent University (BOF). The authors thank all respondents for their useful contribution to this research. The authors also thank the editor and two anonymous reviewers for their valuable comments.

## Appendix A. The information sources for the implementation analysis

### Policy plans

- Long-term Forestry Plan (1998–2017)
- Forestry Action Plan (1998–2003)
- Spatial Structure Plan Flanders (1997)
- Environment Policy Plans (1997–2002; 2003–2007)

### Legislation

- Forest decree (including implementation orders)
- Nature decree
- Landscape decree
- Field code
- Tenure law

- Spatial planning decree
- Private–public cooperation decree
- EU treaty
- EG regulations 2080/92 and 1257/99, respectively on community aid scheme for forestry measures in agriculture regulation and on support for rural development from the European Agricultural Guidance and Guarantee Fund (EAGGF) and amending and repealing certain regulations.
- Kyoto protocol
- Policy evaluations
  - Nature evaluation report (2003, 2005)
  - Documents of the ad hoc working group on forest expansion of the Flemish Forest Council
- Doctoral dissertations
  - Bogaert (2004) and Van Herzele (2005)
- Policy documents and letters
  - documents of the cooperation agreements between the Flemish and local governments
  - documents of the forest expansion team of the Flemish Forest Agency
  - policy documents and policy letters of the Flemish ministers responsible for forest policy (1999–2004; 2004–2009)

## References

- Ackerman, B.A., Stewart, R.B., 1985. Reforming environmental law. *Stanford Law Review* 37 (5), 1333–1365.
- Barden, C.J., Jones, S.B., Biles, L.E., 1996. Extension forestry education: reaching the people who make decisions. *Journal of Forestry* 94 (3), 31–35.
- Barr, N., Cary, J., 2000. Influencing Improved Natural Resource Management on Farms: a Guide to Understanding Factors Influencing the Adaptation of Sustainable Resource Practices. Social Science Center, Bureau of Resource Sciences, Canberra, 44 pp.
- Beetham, D., 1993. *The Legitimation of Power*. Palgrave Macmillan, Basingstoke, 280 pp.
- Bemelmans-Videc, M.-L., Rist, R.C., Vedung, E. (Eds.), 1998. *Carrots, Sticks and Sermons. Policy Instruments and Their Evaluation*. Transaction, New Brunswick, p. 280 pp.
- Bogaert, D., 2004. *Natuurbeleid in Vlaanderen. Natuurontwikkeling en draagvlak als vernieuwingen?* Instituut voor Natuurbehoud, Brussels, Belgium, 377p. (in Dutch).
- Bogaert, D., Gersie, J., 2006. High noon in the low countries: recent nature policy dynamics in the Netherlands and Flanders. In: Arts, B., Leroy, P. (Eds.), *Institutional Dynamics in Environmental Governance, Environment & Policy* 47. Springer, Dordrecht, the Netherlands, pp. 115–138.
- Bressers, H., O'Toole, L.J., 2005. Instrument selection and implementation in a network context. In: Eliadis, P., Hill, M., Howlett, M. (Eds.), *Designing Government: from Instruments to Governance*. McGill-Queen's University Press, Montreal, pp. 132–153.
- Coleman, W.D., 1994. Policy convergence in banking: a comparative study. *Political Studies* 42, 274–292.
- Connolly, S., Richardson, T., Miles, T., 2006. Situated legitimacy: deliberative arenas and the new rural governance. *Journal of Rural Studies* 22, 267–277.
- DEFRA, 2007. *A Strategy for England's Trees, Woods and Forests*. Department for Environment, Food and Rural Affairs, 42 pp.
- de Molenaar J.G., 1998. Een verkennende beschouwing over grondhoudingen, natuurbeelden en natuurvisies in relatie tot draagvlak voor natuur, IBN-rapport 345, IBN-DLO, Wageningen (in Dutch).
- Dolowitz, D., with Hulme, R., Nellis, M., O'Neal, F., 2000. *Policy Transfer and British Social Policy: Learning from the USA?* Open University Press, Buckingham, UK.
- Dolowitz, D., Marsh, D., 1996. Who learns what from whom?: A review of the policy transfer literature. *Political studies* 44 (2), 343–357.
- Dolowitz, D., Marsh, D., 2000. Learning from abroad: the role of policy transfer in contemporary policy making. *Governance* 13 (1), 5–24.
- Dumortier, M., De Bruyn, L., Wils, C., Paelinckx, D., Vander Mijnsbrugge, K., Cox, K., Sioen, G., Roskams, P., Vandekerckhove, K., Hens, M., 2005. Bossen en struwelen. In: Dumortier, M., De Bruyn, L., Peymen, J., Schneiders, A., Van Daele, T., Van Reeth, W., Weyembergh, G., Kuijken, E. (Eds.), *Natuurrapport 2005. Toestand van de natuur in Vlaanderen: cijfers voor het beleid*. Mededeling van het Instituut voor Natuurbehoud nr.24, Brussel, pp. 115–128 (in Dutch).
- de Moor, A.P.G., 1997. *Perverse Incentives: Hundreds of Billions of Dollars in Subsidies now Harm the Economy, the Environment, the Equity and Trade*. Earth Council, San Jose, Costa Rica.
- Elands, B.H.M., Wiersum, K.F., 2001. Forestry and rural development in Europe: an exploration of socio-political discourses. *Forest Policy and Economics* 3, 5–16.
- Eliadis, P., Hill, M., Howlett, M. (Eds.), 2005. *Designing Government: from Instruments to Governance*. McGill-Queen's University Press, Montreal, p. 454 pp.
- Evans, M., 2006. At the interface between theory and practice - policy transfer and lesson drawing. *Public administration* 84 (2), 479–489.
- Evers, F.W.R., Beckers, T.A.M., Winsemius, P., 2004. Rood voor Groen. Van filosofie naar resultaat. Globus en Amstelland MDC, 82 pp. (in Dutch).
- Garrod, G., Willis, K., 1992. Valuing goods' characteristics: an application of the hedonic price method to environmental attributes. *Journal of Environmental Management* 34 (1), 59–76.
- Gibson, R.B. (Ed.), 1999. *Voluntary Initiatives: the New Politics of Corporate Greening*. Broadview Press, Peterborough, p. 268 pp.
- Gogging, M.L., Bowman, A.O., Lester, J., O'Toole Jr., L.J., 1990. *Implementation Theory and Practice: Toward a Third Generation*. Scott, Foresman/Little Brown, Glenview, 230 pp.
- Grabosky, P., 1995. Counterproductive regulation. *International Journal of the Sociology of Law* 23, 347–369.
- Groeneveld, R., van Rheenen, T., Brouwer, F., 2004. *Bio-Diversity Enhancing Programs: Are They Knowledge Driven?* BIOFACT, Policy Analysis, The Netherlands, 58 pp.
- Gunningham, N., 1997. Toward optimal environmental policy: the case of biodiversity conservation. *Ecology Law Quarterly* 24 (2), 243–298.
- Gunningham, N., Grabosky, P., 1999. *Smart Regulation. Designing Environmental Policy*. Oxford Legal Studies. Oxford University Press, New York, 494 pp.
- Haas, P.M., 1992. Introduction: epistemic communities and international policy coordination. *International Organization* 46 (1), 1–35.
- Hartig, T., Evans, J., Jamner, L.D., Davis, D.S., Gärling, T., 2003. Tracking restoration in natural and urban field settings. *Journal of Environmental Psychology* 23, 109–123.
- Helles, F., Lindal, M., 1996. Afforestation experiences in Nordic countries. *Nordisk Ministerråd, Kbh. Nord* 1996, 15.
- Hood, C., 1986. *The Tools of Government*. Chatham House, Chatham, 192 pp.
- Hoogerwerf, A., Arentsen M.J., Klok P.J., 1993. Om een aanvaardbaar beleid. Een studie over de maatschappelijke acceptatie van overheidsbeleid, Centrum voor bestuurskundig onderzoek en onderwijs, Enschede (in Dutch).
- Howlett, M., 1991. Policy instruments, policy styles and policy implementation: national approaches to theories of instrument choice. *Policy Studies Journal* 19 (2), 1–21.
- Howlett, M., 2004. Beyond good and evil in policy implementation: instrument mixes, implementation styles, and second generation theories of policy instrument choice. *Policy and Society* 23 (2), 1–17.
- Howlett, M., Rayner, J., 2004. (Not so) "smart regulation"? Canadian shellfish aquaculture policy and the evolution of instrument choice for industrial development. *Marine Policy* 28 (2), 171–184.
- Jänicke, M., 1988. Structural change and environmental impact: empirical evidence on thirty-one countries in East and West. *Environmental Monitoring and Assessment* 12, 99–114.
- Jones, S.B., Luloff, A.E., Finley, J.C., 1995. Another look at NIPF's: facing our myths. *Journal of Forestry* 93 (9), 41–44.
- Jordan, A., Wurzel, R., Zito, A., Brückner, L., 2003. European governance and the transfer of new environmental policy instruments (NEPI's) in the European Union. *Public Administration* 81 (3), 555–574.
- Jordan, A., Wurzel, R.K.W., Zito, A., 2005. The rise of new policy instruments in comparative perspective: has governance eclipsed government? *Political Studies* 53, 477–496.
- Kaplan, R., 2001. The nature of the view from home: psychological benefits. *Environment & Behavior* 33, 507–542.
- Kassioumis, K., Papageorgiou, K., Christodoulou, A., Blioumis, V., Stamou, N., Karameris, A., 2004. Rural development by afforestation in predominantly agricultural areas: issues and challenges from two areas in Greece. *Forest Policy and Economics* 6, 483–496.
- Kesteloot, C., 2003. Verstedelijking in Vlaanderen: problemen, kansen en uitdagingen voor het beleid van de 21ste eeuw. In: Schets, L. (Ed.) *De eeuw van de stad, over stadsrepublicken en rastersteden, voorstudies*. Brussel, Ministerie van de Vlaamse Gemeenschap–Project Stedenbeleid, pp. 15–39 (in Dutch).
- Kirkebak, M., Thormann, A., 2000. Evaluering af den gennemførte skovrejsning 1989–1998. Skov- og Naturstyrelsen, <http://www.sns.dk/skov/netpub/evaluering>.
- Kittredge, D.B., 2005. The cooperation of private forest owners on scales larger than one individual property: international examples and potential application in the United States. *Forest Policy and Economics* 7 (4), 671–688.
- Kline, J.D., Alig, R.L., Johnson, R.J., 2000. Fostering the production of nontimber services among forest owners with heterogeneous objectives. *Forest Science* 46, 302–311.
- Knill, C., Lenschow, A., 1998. Coping with Europe: the impact of British and German administrations on the implementation of EU environmental policy. *Journal of European Public Policy* 5 (4), 595–614.
- Konijnendijk, C.C., 1999. Urban forestry: comparative analysis of policies and concepts in Europe - Contemporary urban forest policy-making in selected cities and countries of Europe. EFI Working Paper 20. European Forest Institute, Joensuu, pp. 266.
- Koontz, T.M., 2001. Money talks—but to whom? Financial versus nonmonetary motivations in land use decisions. *Society and Natural Resources* 14 (1), 51–65.
- Leinfelder, H., 2004. Switch of scope on spatial development perspectives for agriculture in urbanised and urbanising regions. Abstract in book of abstracts van XI World Congress of Rural Sociology "Globalisation, risks and resistance in rural economies and societies" (Trondheim, 25–30 juli 2004), p. 44.

- Leinfelder, H., 2007. Dominante en alternative planningsdiscoursen ten aanzien van open ruimte en landbouw in een (Vlaamse) verstedelijkte context. Doctoraatsverhandeling. Gent, Universiteit Gent–Faculteit Ingenieurswetenschappen (in Dutch).
- Leinfelder, H., Van Den Abeele, P., 2007. Strategic zoning plan for open space. <http://www.ifhp2007copenhagen.dk/>, 51st IFHP World Congress "Futures of cities" (Kopenhagen, 23–26 September 2007). International Federation for Housing and Planning, 12 pp.
- Linder, S.H., Peters, B.G., 1989. Instruments of government: perceptions and context. *Journal of Public Policy* 9 (1), 35–58.
- LVN, 2000. Natuur voor mensen, mensen voor natuur. Nota natuur, bos en landschap in de 21<sup>ste</sup> eeuw's Gravenhage, Ministerie van Landbouw, Natuur en Voedselkwaliteit, 98 pp. (in Dutch).
- Loonstra, J., 2002. Op weg naar nieuwe landgoederen in de provincie Overijssel. Waanders Drukkers, Zwolle, 36 pp. (in Dutch).
- Madson, L.M., 2002. The Danish afforestation program and spatial planning: new challenges. *Landscape and Urban Planning* 58, 241–254.
- Majone, G., 1991. Cross-National Sources of Regulatory Policy Making in Europe and the United States. *Journal of Public Policy* 11, 79–106.
- Meijerink, S., 2005. Understanding policy stability and change. The interplay of advocacy coalitions and epistemic communities, windows of opportunity, and Dutch coastal flooding policy 1945–2003. *Journal of European Public Policy*, 1060–1077.
- Meiresonne, L., 2001. Bebossing van landbouwgronden met populier. Wat denken de Vlaamse boeren daarover? Hebben zij een zelfde mening als andere Europese boeren? (Resultaten van een enquête). *Silva Belgica* 5, 18–22 (in Dutch).
- Minogue, M., 2002. Governance-based analysis of regulation. *Annals of Public and Cooperative Economics* 73 (4), 649–666.
- Morancho, A.B., 2003. A hedonic valuation of urban green areas. *Landscape and Urban Planning* 66, 35–41.
- Mormont, M., 1987. Rural nature and urban natures. *Sociologia Ruralis* 27, 3–20.
- Myers, N., Kent, J., 2001. *Perverse Subsidies: How Tax Dollars can Undercut the Environment and the economy*. Island Press, Washington, 277 pp.
- Overbeek, G., 2006. Theoretical and methodological framework. In: Overbeek, G. and Terluin, I. (Eds.), *Rural areas under urban pressure, case studies of rural-urban relationships across Europe*. Rapport 7.06.01, Wageningen, Landbouweconomisch Instituut, 27–46.
- Parker, W.C., Colombo, S.J., Cherry, M.L., Flannigan, M.D., Greifenhagen, S., McAlpine, R.S., Paradopol, C., Scarr, T., 2000. Third millennium forestry: what climate change mean to forests and forest management in Ontario. *Forest Chronicle* 76 (3), 445–463.
- Peeters, K., 2004. Beleidsnota Leefmilieu en Natuur 2004–2009. Beleidsnota neergelegd door Kris Peeters, Vlaams Minister van Openbare Werken, Energie, Leefmilieu en Natuur. <http://docs.vlaanderen.be/portaal/beleidsnotas2004/peeters/leefmilieu.pdf> (in Dutch).
- Rist, R.C., 1998. Choosing the right policy instrument at the right time: the contextual challenges of selection and implementation. In: Bemelmans-Videc, M.-L., Rist, R.C., Vedung, E. (Eds.), *Carrots, Sticks and Sermons. Policy Instruments and their Evaluation*. Transaction, New Brunswick, pp. 149–163.
- Rose, R., 1991. What is lesson-drawing? *Journal of Public Policy* 11 (1), 3–30.
- Rose, R., 1993. *Lesson Drawing in Public Policy*. Chatman House, Chatman.
- Salamon, L.M., 1981. Rethinking public management: third-party government and the changing forms of government action. *Public Policy* 29 (3), 255–275.
- Salamon, L.M., Lund, M.S., 1989. The tools approach: basic analytics. In: Salamon, L.M. (Ed.), *Beyond Privatizations: the Tools of Government Action*. Urban Institute, Washington D.C., pp. 23–50.
- Schmitter, P., 2001. What is there to legitimize in the European Union . . . and how might this be accomplished? In *Symposium: Mountain or Molehill? A critical appraisal of the Commission White Paper on Governance*, Jean Monnet Working Paper No. 6/01, NY University School of Law, New York.
- Shin, W.S., 2007. The influence of forest view through a window on job satisfaction and job stress. *Scandinavian Journal of Forest Research* 22 (3), 248–253.
- Sin, M.Y., Miah, M.D., Lee, K.H., 2007. Potential contribution of forestry sector in Bangladesh to carbon sequestration. *Journal of Environmental Management* 82 (2), 260–276.
- Sinclair, D., 1997. Self-regulation versus command and control? Beyond false dichotomies. *Law & Policy* 19 (4), 529–559.
- Stortelder, A.F.H., Schrijver, R.A.M., van den Top, I.M., Alberts, H., 2001. Boeren voor natuur. Scenario's voor het landelijk gebied. Alterra-rapport 279, Alterra, Research Instituut voor de Groene Ruimte, Wageningen, 32 pp. (in Dutch).
- Strang, D., Meyer, J., 1993. Institutional conditions for diffusion. *Theory and Society* 22, 487–511.
- Tyrväinen, L., Miettinen, A., 2000. Property prices and urban forest amenities. *Journal of Environmental Economics and Management* 39, 205–223.
- Ulrich, R.S., 1984. View through a window may influence recovery from surgery. *Science* 224, 420–421.
- Van Gossum, P., Luyssaert, S., Serbruyns, I., Mortier, F., 2005. Forest groups as support to private owners in developing close-to-nature management. *Forest Policy and Economics* 7 (4), 589–601.
- Van Gossum, P., Ledene, L., De Vreese, R., Verheyen, K., 2008. Implementation failure and ability of policy learning of the forest expansion policy in Flanders (northern Belgium). *Forest Policy and Economics*, <http://dx.doi.org/10.1016/j.forpol.2008.07.001>.
- Van Herzele, A., 2005. A tree on your doorstep, a forest in your mind: greenspace planning at the interplay between discourse, physical conditions, and practice. Wageningen University, Wageningen, the Netherlands, 156 pp.
- Van Herzele, A., 2006. A forest for each city and town: story lines in the policy debate for urban forests in Flanders. *Urban Studies* 43 (3), 673–696.
- Vitse, T., 2004. Bosuitbreiding in Vlaanderen: plannen en uitvoeren. Op de Studiedag Natuurontwikkeling Tips voor de toekomst. Brussel, 26 maart 2004 (in Dutch).
- Waterinckx, M., Roelandt, B., 2001. Bosinventarisatie van het Vlaamse Gewest. Ministerie van de Vlaamse Gemeenschap. Afdeling Bos & Groen (in Dutch).
- Williams, H.V., 2006. Creating a sustainable forest—the national forest. In: Wall, S. (Ed.), *Small-Scale Forestry and Rural Development. The intersection of ecosystems, economics and society*. Proceedings of IUFRO 3.08 Conference, 538–544, Galway, Ireland, Galway-Mayo Institute of Technology.
- Yin, R.K., 2003. *Case study research: design and methods*. Applied Social Research Method Series, vol. 5., third ed. Sage Publications, California, 200 pp.